

**Notice of Allowability**

Application No.	Applicant(s)
10/659,645	ANDERSON ET AL.
Examiner	Art Unit
Donald M. Lair	2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to \_\_\_\_\_.

2.  The allowed claim(s) is/are 1-30.

3.  The drawings filed on 10 September 2003 are accepted by the Examiner.

4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some\*    c)  None    of the:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.

(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- 1.  Notice of References Cited (PTO-892)
- 2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 9/10/03
- 4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
- 5.  Notice of Informal Patent Application (PTO-152)
- 6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
- 7.  Examiner's Amendment/Comment
- 8.  Examiner's Statement of Reasons for Allowance
- 9.  Other \_\_\_\_\_.

  
**JAY PATIDAR**  
**PRIMARY EXAMINER**

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1 – 30 are allowed.
2. The following is an examiner’s statement of reasons for allowance:
3. In regards to Claim 1 the prior art of record fails to disclose a method for digitizing portions of a waveform sent through a moisture-bearing medium, providing an unshielded transmission line that passes through the medium, providing a shielded transmission line connected to the latching comparator, launching a waveform on the unshielded transmission line, and measuring the amplitude of the resultant waveform at the latching comparator by using successive approximation, specifically in the combination as claimed.
4. In regards to Claims 11 and 21, the prior art of record fails to disclose a method for digitizing portions of a waveform sent through a moisture-bearing medium comprising the steps of launching a waveform onto a transmission line that ends at an open or shorted distal end and using successive approximation to measure the amplitude of the waveform in the specific combination as claimed.
5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Pertinent Prior Art***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2858

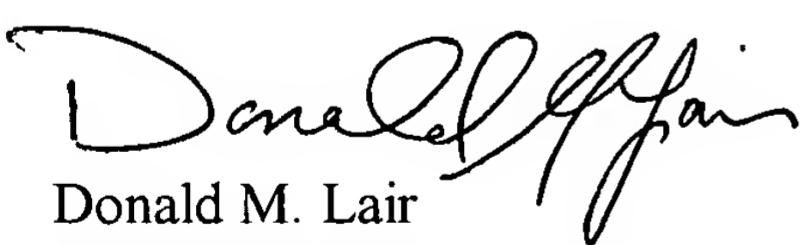
7. Rynhart et al. (US-6,340,892), Kelly (US-5,818,241), McCarthy et al. (US-5,677,476), and Bancroft (US-5,148,985) disclose methods of taking soil moisture reading by placing transmission lines and probes into the medium.

***Conclusion***

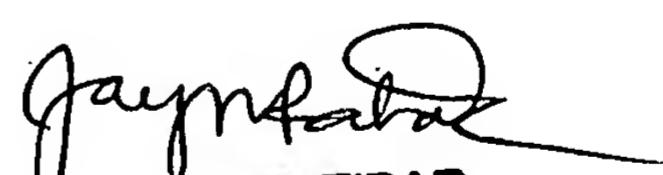
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald M. Lair whose telephone number is (571) 272-2232. The examiner can normally be reached on Monday - Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald M. Lair  
Patent Examiner  
Art Unit 2858  
September 1, 2004

  
JAY PATIDAR  
PRIMARY EXAMINER